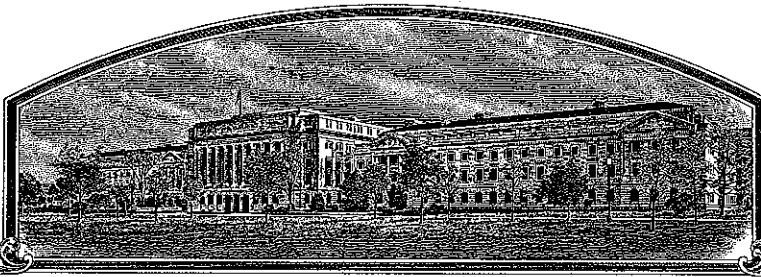


No.

200300056



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Hybas Vegetable Seed Co. Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Vandenberg'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twelfth day of December, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER <u>Pybas Vegetable Seed Co., Inc.</u>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <u>PYB 6088</u>	3. VARIETY NAME <u>Vandenberg</u>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <u>301 N. Depot Street</u> <u>P.O. Box 868</u> <u>Santa Maria, CA 93456</u>		5. TELEPHONE (include area code) <u>(805) 922-4624</u>	FOR OFFICIAL USE ONLY PVPO NUMBER <u>20030005</u>
		6. FAX (include area code) <u>(805) 928-0293</u>	FILING DATE <u>12/12/2002</u>
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <u>Corporation</u>	8. IF INCORPORATED, GIVE STATE OF INCORPORATION <u>California</u>	9. DATE OF INCORPORATION <u>12-16-83</u>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <u>Keith Trammell</u> <u>Pybas Vegetable Seed Co.</u> <u>301 N. Depot St.</u> <u>P.O. Box 868</u> <u>Santa Maria, CA 93456</u>			FILING AND EXAMINATION FEES: \$ <u>2705.00</u> DATE <u>12/12/2002</u> CERTIFICATION FEE: \$ <u>682-</u> DATE <u>10/18/05</u>
11. TELEPHONE (Include area code) <u>(805) 922-4624</u>	12. FAX (Include area code) <u>(805) 928-0293</u>	13. E-MAIL 	14. CROP KIND (Common Name) <u>Lettuce</u>
15. GENUS AND SPECIES NAME OF CROP <u>Lactuca sativa</u>		16. FAMILY NAME (Botanical) <u>Compositae</u>	
17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office) </div> <div style="width: 48%;"> 19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22) </div> </div>			
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> 20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED </div> <div style="width: 48%;"> 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1,2,3, etc. (If additional explanation is necessary, please use the space indicated on the reverse.) </div> </div>			
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER <u>Robert E. Pybas</u>		SIGNATURE OF OWNER 	
NAME (Please print or type) <u>Robert E. Pybas</u>		NAME (Please print or type) 	
CAPACITY OR TITLE <u>President</u>	DATE <u>12/2/02</u>	CAPACITY OR TITLE 	DATE

200300056
application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2500 viable untreated seeds (a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that is visible in the seed, that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$320 filing fee and \$2,385 examination fee, payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent;

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
- (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
- (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

First date of seed sale: 12-17-01, USA. We market our seed through a dealer network and have no direct knowledge of sales of crops of 'Vandenberg' 12-12-01 RAB 9/13/05

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed/lsg-sd.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (02-99) which is obsolete.

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EXHIBIT A

Origin and Breeding History of 'Vandenberg' (PYB 6088)

'Vandenberg' was developed using the pedigree breeding method, and is derived from the cross Del Rey x Tiber made in the field in the San Joaquin Valley in the summer of 1995.

The F1 seed was planted in the greenhouse in September, 1995 and the F2 seed was harvested around mid spring, 1996.

The F2 was subsequently planted in June of 1996 for a mid summer harvest in Lompoc, California. Plants were mostly medium to large in size with variation in color intensity, and smoothness of the butt. Thirteen single plants were selected from this trial, placed in the greenhouse and produced F3 seed in late fall, 1996.

The F3's were planted in the San Joaquin Valley in May of 1997. Smaller, paler, and faster bolting plants were removed from these populations, and seed from the remaining plants (F4B) were bulked together in September, 1997.

The F4B lot was planted in three trials in 1998: a trial in Lompoc in January, near Santa Maria in April, and in the San Joaquin Valley in May. The line was observed to have good early season vigor in the Lompoc trial and that it segregated for Big Vein resistance. In the Santa Maria Trial it was observed to be of excellent vigor with large round heads, short cores, and had an absence of tip burn. From the San Joaquin Valley six individual plants were selected and F5 seed from these were harvested in September of 1998.

The F5 lots were planted in Lompoc in January, 1999 under heavy Big Vein pressure. One of these lines had excellent uniformity. It was early maturing, had large round heads and was observed to be resistant to Big Vein virus. This line was designated PYB 6088, and remnant seed was planted in the San Joaquin Valley in late April that spring for a bulk increase (F6B).

The F6B lot was trialed throughout the 2000 growing season and was found to be uniform and stable. It was increased again that summer in the San Joaquin Valley (F7B). This lot was harvested in August, 2000, cleaned, mosaic indexed, coated, distributed for dealer trials, and was again found to be both uniform and stable in a large number of trials throughout the Santa Maria and Salinas Valleys in 2001. A limited amount of this lot was sold for commercial early spring plantings of 2002.

A commercial seed crop of Vandenberg was grown in the summer of 2002.

A spontaneously occurring, large, non-heading or 'Cos' type variant appears in Vandenberg at a frequency of about 1 in 3,000 plants.

EXHIBIT B
Statement of Distinctness

'Vandenberg' (PYB 6088) is a large heading, Big Vein resistant iceberg lettuce variety particularly well suited to early season plantings in the California coastal regions where Big Vein can be troublesome.

'Vandenberg' is most similar to the variety 'Del Rey', its maternal parent, as both have excellent Big Vein resistance. (See Exhibit D). It differs from 'Del Rey', however, in that it produces heavier heads (778.2 gms Vs 679.0 gms) with a larger head diameter (16.7 cm Vs 16.1 cm). 'Vandenberg' also has a significantly taller mature seed stalk than 'Del Rey' (138.9 cm Vs 116.7 cm). These figures are the means of the trials reported in this exhibit.

'Del Rey', as most other varieties grown during the same period as 'Vandenberg', is slightly darker in color than 'Vandenberg'. 'Del Rey' reads 146A on the Royal Horticultural Society Color Chart, whereas 'Vandenberg' reads 146B.

'Vandenberg' is different from its male parent, 'Tiber', in that it is Big Vein resistant whereas 'Tiber' is not.

Characteristic

	'Vandenberg'	vs	'Del Rey'
Fourth leaf apical margin	Moderately dentate		Finely dentate
Fourth leaf undulation	Flat		Medium
Mature leaf incision depth	Absent		Moderate
Mature leaf indentation	Entire		Crenate
Leaf thickness	Thick		Intermediate
Bolter leaves	Straight		Curved
Terminal inflorescence	Present		Absent
Lateral shoots above head	Present		Absent

These differences were added according to letter of 8/12/05 from applicant.
RAD
9/13/05

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK AND SEED DIVISION
OBJECTIVE DESCRIPTION OF VARIETY
LETTUCE *Lactuca sativa*

EXHIBIT C

NAME OF APPLICANT (S) Pybas Vegetable Seed Co., Inc.	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 301 North Depot St. P.O. Box 868 Santa Maria, CA 93456	PVP NUMBER 200300056
	VARIETY NAME
	EXPERIMENTAL DESIGNATION

Place numbers in the boxes for the characters which best describe this variety. Measured data should be the mean of an appropriate number (at least 10) of well spaced plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The location of the test area is: **California Central Coast** Color System Used: **Royal Hort. Soc. Color Standard**

1. PLANT TYPE: (See list of suggested check varieties page 4.)

<input checked="" type="checkbox"/> 06	01=Cutting/Leaf 02=Butterhead 03=Bibb 04=Cos or Romaine	05=Great Lakes Group 06=Vanguard Group 07=Imperial Group 08=Eastern (Ithaca) Group	09=Stem 10=Latin 11=OTHER
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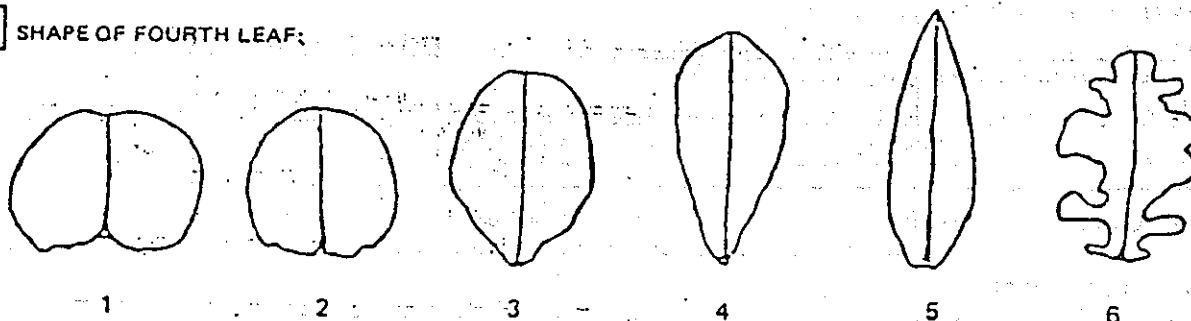
2. SEED:

<input checked="" type="checkbox"/> 2	COLOR 1=White (Silver Gray) 2=Black (Gray Brown) 3=Brown (Amber)	<input type="checkbox"/>	LIGHT DORMANCY 1=Light Required 2=Light Not Required	<input type="checkbox"/>	HEAT DORMANCY 1=Susceptible 2=Not Susceptible
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3. COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day old seedling grown under optimal conditions.

☒ 2 SHAPE OF COTYLEDONS: 1=Broad 2=Intermediate 3=Spatulate

☒ 3 SHAPE OF FOURTH LEAF:



☒ 3 LENGTH/WIDTH INDEX OF FOURTH LEAF: L/W x 10

<input checked="" type="checkbox"/> 4 APICAL MARGIN:	} 1=Entire 2=Crenate/Gnawed 3=Finely Dentate 4=Moderately Dentate 5=Coarsely Dentate 6=Incised 7=Lobed 8=OTHER (specify)
<input checked="" type="checkbox"/> 3 BASAL MARGIN:	

<input checked="" type="checkbox"/> 1 UNDULATION:	1=Flat	2=Slight	3=Medium	4=Marked
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<input checked="" type="checkbox"/> 3 GREEN COLOR:	1=Yellow Green	3=Medium Green	5=Blue Green	7=Gray Green
	2=Light Green	4=Dark Green	6=Silver Green	

ANTHOCYANIN:

<input checked="" type="checkbox"/> 1 DISTRIBUTION:	1=Absent 2=Margin Only	3=Spotted 4=Throughout	5=OTHER (specify)
---	---------------------------	---------------------------	-------------------

<input type="checkbox"/> CONCENTRATION:	1=Light	2=Moderate	3=Intense
---	---------	------------	-----------

<input checked="" type="checkbox"/> 1 ROLLING:	1=Absent	2=Present
--	----------	-----------

<input checked="" type="checkbox"/> 1 CUPPING:	1=Uncupped	2=Slight	3=Markedly
--	------------	----------	------------

<input checked="" type="checkbox"/> 1 REFLEXING:	1=None	2=Apical Margin	3=Lateral Margins
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5

4. MATURE LEAVES (observe harvest-mature outer leaves):

NOTE: Provide color photo of harvest-mature leaves which accurately shows color and margin characteristics.

MARGIN:

<input type="checkbox"/> 1	INCISION DEPTH: (deepest penetration of the margin)	1=Absent/Shallow (Dark Green Boston)	2=Moderate (Vanguard)	3=Deep (Great Lakes 659)
<input type="checkbox"/> 1	INDENTATION: (finest divisions of the margin)	1=Entire (Dark Green Boston)	3=Deeply Dentate (Great Lakes 659)	5=OTHER (specify)
<input type="checkbox"/> 2	UNDULATION OF THE APICAL MARGIN:	2=Shallowly Dentate (Great Lakes 65)	4=Crenate (Vanguard)	
<input type="checkbox"/> 2	GREEN COLOR:	1=Absent/Slight (Dark Green Boston)	2=Moderate (Vanguard)	3=Strong (Great Lakes 659)
<input type="checkbox"/> 2		1=Very Light Green (Bibb)	3=Medium Green (Great Lakes)	5=Very Dark Green
		2=Light Green (Minetto)	4=Dark Green (Vanguard)	6=OTHER
ANTHOCYANIN (grown at or below 10 C):				
<input type="checkbox"/> 1	DISTRIBUTION:	1=Absent	3=Spotted (Calif. Cream Butter)	5=OTHER (specify)
		2=Margin Only (Big Boston)	4=Throughout (Prize Head)	
<input type="checkbox"/>	CONCENTRATION:	1=Light (Iceberg)	2=Moderate (Prize Head)	3=Intense (Ruby)
<input type="checkbox"/> 3	SIZE:	1=Small	2=Medium	3=Large
<input type="checkbox"/> 1	GLOSSINESS:	1=Dull (Vanguard)	2=Moderate (Salinas)	3=Glossy (Great Lakes)
<input type="checkbox"/> 1	BLISTERING:	1=Absent/Slight (Salinas)	2=Moderate (Vanguard)	3=Strong (Prize Head)
<input type="checkbox"/> 3	LEAF THICKNESS:	1=Thin	2=Intermediate	3=Thick
<input type="checkbox"/> 1	TRICHOMES:	1=Absent (smooth)	2=Present (spiny)	

5. PLANT (at market stage. Choose a comparison variety appropriate for this type.):

<input type="checkbox"/> 4	<input type="checkbox"/> 8	SPREAD OF FRAME LEAVES:	<input type="checkbox"/> 4	<input type="checkbox"/> 7	cm This Variety	<input type="checkbox"/> 4	<input type="checkbox"/> 7	cm Del Rey	(specify comparison variety)			
<input type="checkbox"/> 1	<input type="checkbox"/> 7	HEAD DIAMETER (market trimmed with single cap leaf):	<input type="checkbox"/> 1	<input type="checkbox"/> 6	cm This Variety	<input type="checkbox"/> 1	<input type="checkbox"/> 6	cm Del Rey	(specify comparison variety)			
<input type="checkbox"/> 3	HEAD SHAPE:	1=Flattened	3=Spherical	5=Non-Heading		2=Slightly Flattened	4=Elongate	6=OTHER				
<input type="checkbox"/> 3	HEAD SIZE CLASS:	1=Small	2=Medium	3=Large								
<input type="checkbox"/> 2	<input type="checkbox"/> 4	HEAD COUNT PER CARTON										
<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 8	HEAD WEIGHT:	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 9	g This Variety	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 9	g Del Rey	(specify comparison variety)
<input type="checkbox"/> 3	HEAD FIRMNESS:	1=Loose	3=Firm			2=Moderate	4=Very Firm					

6. BUTT (bottom of market-trimmed head):

<input type="checkbox"/> 2	SHAPE:	1=Slightly Concave	2=Flat	3=Rounded
<input type="checkbox"/> 1	MIDRIB:	1=Flattened (Salinas)	2=Moderately Raised	3=Prominently Raised (Great Lakes 659)

7. CORE (stem of market-trimmed head):

<input type="checkbox"/> 3	<input type="checkbox"/> 2	mm Diameter at base of head		
<input type="checkbox"/> 5	<input type="checkbox"/> 3	Ratio of head diameter/core diameter		
<input type="checkbox"/> 3	<input type="checkbox"/> 2	Core height from base of head to apex:	<input type="checkbox"/> 3	<input type="checkbox"/> 1
		mm This Variety	<input type="checkbox"/> 3	<input type="checkbox"/> 1
			mm Del Rey	(specify comparison variety)

8. BOLTING (Give First Water Date 4-26-01): NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

<input type="checkbox"/> 6	<input type="checkbox"/> 1	Number of days from First Water Date to seed stalk emergence (summer conditions):	<input type="checkbox"/> 6	<input type="checkbox"/> 1	This Variety	<input type="checkbox"/> 6	<input type="checkbox"/> 1	Del Rey	(specify comparison variety)			
<input type="checkbox"/> 3	BOLTING CLASS:	1=Very Slow	3=Medium	5=Very Rapid		2=Slow	4=Rapid					
<input type="checkbox"/> 1	<input type="checkbox"/> 3	<input type="checkbox"/> 9	Height of mature seed stalk:	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 7	cm This Variety	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 7	cm Del Rey	(specify comparison variety)

55

Spread of Bolter Plant (at widest point):

cm This Variety

56 cm

Del Rey

(specify comparison variety)

1

BOLTER LEAVES:

1= Straight

2= Curved

2

MARGIN:

1= Entire

2= Dentate

2

COLOR:

1= Light Green

2= Medium Green

3= Dark Green

BOLTER HABIT:

2

TERMINAL
INFLORESCENCE:

1= Absent

2= Present

2

LATERAL SHOOTS:
(above head)

1= Absent

2= Present

1

BASAL SIDE SHOOTS:

1= Absent

2= Present

9. MATURITY (earliness of harvest-mature head formation):

NOTE: Complete this section for at least one season.

SEASON	Applic. 1/ #of days	Check 2/ #of days	CHECK VARIETY 3/
Spring	1 0 1	1 0 1	Del Rey
Summer			
Fall			
Winter			

Give planting date(s), and location(s):

Spring Plant Date 2-7-01, Harvest Date 5-21-01. Lompoc Valley, California

Summer

Fall

Winter

1/ First water date to harvest.

2/ Fill in check variety name on the appropriate line.

10. ADAPTATION:

PRIMARY REGIONS OF ADAPTION (tested and proven adapted):

(0=Not tested

1=Not Adapted

2=Adapted)

0

Southwest (Calif., Ariz. desert)

2

West Coast

0

Northeast

0

Northcentral

0

Southeast

0

OTHER

SEASON:

2

Spring (area west coast)

0

Fall (area)

0

Summer (area)

0

Winter (area)

0

GREENHOUSE:

0=Not tested

1=Not Adapted

2=Adapted

1

SOIL TYPE:

1=Mineral

2=Organic

3=Both

11. DISEASES AND STRESS REACTIONS (0=Not tested; 1=Susceptible; 2=Intermediate; 3=Resistant; 4=Highly resistant; 5=Tolerant):

VIRUS

- ☒ 3 Big Vein
- ☒ 1 Lettuce Mosaic
- ☐ 0 Cucumber Mosaic
- ☐ 0 Broad Bean Wilt
- ☐ 0 Turnip Mosaic
- ☒ 1 Beet Western Yellows
- ☐ 0 Lett. Infectious Yellows
- ☐ Other Virus _____

FUNGAL/BACTERIAL

- ☒ 1 Corky Root Rot (Pythium Root Rot)
- ☒ 1 Downy Mildew (Races _____)
- ☐ 0 Powdery Mildew
- ☒ 1 Sclerotinia Rot
- ☐ 0 Bacterial Soft Rot (Pseudomonas spp. & others)
- ☐ 0 Botrytis (Gray Mold)
- ☐ OTHER _____

INSECTS

- ☐ 0 Cabbage Loopers
- ☐ 0 Root Aphids
- ☐ 0 Green Peach Aphid
- ☐ Other Insect _____

PHYSIOLOGICAL/STRESS

- ☒ 3 Tipburn
- ☐ 0 Heat
- ☐ 0 Drought
- ☒ 5 Cold
- ☐ 0 Salt
- ☐ 0 Brown Rib (Rib Discoloration, Rib Blight)
- ☐ OTHER _____

POST HARVEST

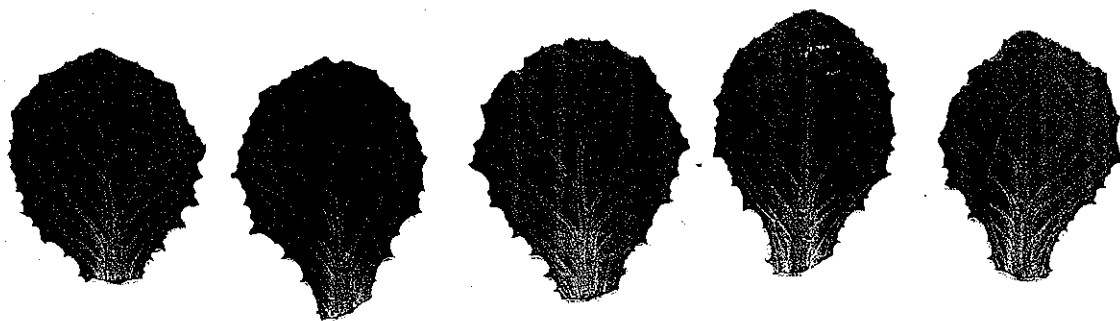
- ☐ 0 Pink Rib
- ☐ 0 Russet Spotting
- ☐ 0 Rusty Brown Discoloration
- ☐ 0 Internal Rib Necrosis (Blackheart, Gray Rib, Gray Streak)
- ☐ 0 Brown Stain

12. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

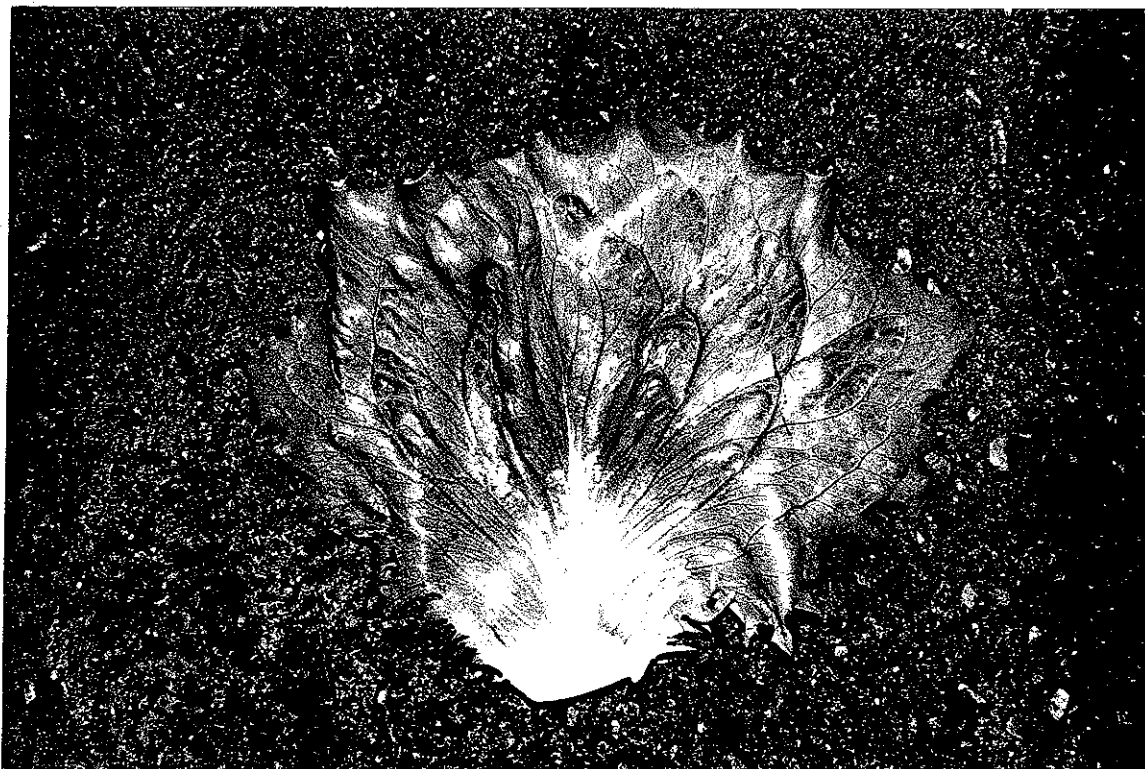
13. COMMENTS:

SUGGESTED CHECK VARIETIES

TYPE	CHECK VARIETY
1) CUTTING/LEAF	SALAD BOWL
2) BUTTERHEAD	DARK GREEN BOSTON
3) BIBB	BIBB
4) COS, OR ROMAINE	PARRIS ISLAND
5) GREAT LAKES GROUP	GREAT LAKES 659-700
6) VANGUARD GROUP	VANGUARD
7) IMPERIAL GROUP	VIVA
8) EASTERN GROUP	ITHACA
9) STEM	CELTUCE
10) LATIN	MATCHLESS



Fourth leaf of 20 day old seedlings of 'Vandenberg'



Maple Leaf

RND
9/13/05



View of field from road

RND
9/13/05



Lighter color of 'Vandenberg' in
'Pybas 251' field.

PMP
9/13/05

EXHIBIT D

Trial 1: Percent of plants in four replications showing vein clearing symptoms of Big Vein at 98 days of age. Watered on 2-9-01.
Lompoc, CA.

<u>Rep</u>	<u>Vandenberg</u>	<u>Del Rey</u>	Pybas 251 (<u>Susc. Variety</u>)
I	0	0	43
II	0	0	33
III	0	0	39
IV	0	0	38

Trial 2: Percent of plants in four replications showing vein clearing symptoms of Big Vein at 83 days of age. Watered on 3-16-01.
Lompoc, CA.

<u>Rep</u>	<u>Vandenberg</u>	<u>Del Rey</u>	Spanish Bay (<u>Susc. Variety</u>)
I	0	0	8
II	0	0	22
III	0	0	18
IV	0	0	16

Trial 1: Lompoc, CA. Seeded: 2-7-01. Evaluated: 5-18-01.

Sample size: 10 plants. Four replications. Randomized Complete Block design.

ANOVA: $F(\text{req'd}).05 = 10.13$ $F(\text{req'd}).01 = 34.12$

	Vandenberg	Del Rey
Frame diameter		
Mean (cm)	47.4	46.4
Std. dev.	0.89	0.55
ANOVA:		
F(calc.) = 5.871		
Head weight		
Mean (gms.)	759.5	680.3
Std. dev.	39.12	34.81
ANOVA:		
F(calc.) = 15.47 *		
Head diameter		
Mean (cm)	16.7	15.9
Std. dev.	0.21	0.17
ANOVA:		
F(calc.) = 16.48 *		
Core Length		
Mean (cm)	2.97	3.08
Std. dev.	0.079	0.164
ANOVA:		
F(calc.) = 3.585		
Core diameter		
Mean (cm)	3.19	3.18
Std. dev.	0.150	0.067
ANOVA:		
F(calc.) = 0.008		

Trial 2: Lompoc, CA. Seeded: 3-15-01. Evaluated: 5-31-02.

Sample size: 10 plants. Four replications. Randomized Complete Block design.

ANOVA: $F(\text{req'd}).05 = 10.13$ $F(\text{req'd}).01 = 34.12$

	Vandenberg	Del Rey
Frame diameter		
Mean (cm)	48.9	48.3
Std. dev.	0.66	0.49
ANOVA:		
F(calc.) = 1.384		
Head weight		
Mean (gms.)	796.8	677.6
Std. dev.	24.66	31.17
ANOVA:		
F(calc.) = 39.369 **		
Head diameter		
Mean (cm)	16.7	16.3
Std. dev.	0.15	0.082
ANOVA:		
F(calc.) = 55.47 **		
Core Length		
Mean (cm)	2.98	2.84
Std. dev.	0.115	0.106
ANOVA:		
F(calc.) = 6.959		
Core diameter		
Mean (cm)	3.12	3.02
Std. dev.	0.054	0.031
ANOVA:		
F(calc.) = 13.44 *		

Trial 3: Bolting Trial. San Joaquin Valley, CA. Seeded: 4-26-01
 Measurements: 7-27-01. Sample size: 10 plants. Four replications.
 Randomize Complete Block design.
 ANOVA: $F(\text{req'd}) .05 = 10.13$ $F(\text{req'd}) .01 = 34.12$

<u>Mature Seed Stalk Height</u>	<u>Vandenberg</u>	<u>Del Rey</u>
Mean (cm)	138.0	117.1
Std. dev.	2.495	3.945
ANOVA:		
$F(\text{calc.}) = 185.48^{**}$		

<u>Width of Seed Head</u>		
Mean (cm)	53.3	54.8
Std. dev.	2.555	2.573
ANOVA:		
$F(\text{calc.}) = .3918$		

Trial 4: Bolting Trial. San Joaquin Valley, CA. Seeded: 4-16-02
 Measurements: 8-7-02. Sample size: 10 plants. Four replications.
 Randomized Complete Block design.
 ANOVA: $F(\text{req'd}) .05 = 10.13$ $F(\text{req'd}) .01 = 34.12$

<u>Mature Seed Stalk Height</u>	<u>Vandenberg</u>	<u>Del Rey</u>
Mean (cm)	139.7	116.3
Std. dev.	3.766	3.852
ANOVA:		
$F(\text{calc.}) = 521^{**}$		

<u>Width of Seed Head</u>		
Mean (cm)	56.9	56.8
Std. dev.	2.554	2.462
ANOVA:		
$F(\text{calc.}) = .002$		

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) <i>Pybas Vegetable Seed Co., Inc.</i>	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER <i>PYB 6088</i>	3. VARIETY NAME <i>Vandenberg</i>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) <i>301 North Depot St. P.O. Box 868 Santa Maria, CA 93456</i>	5. TELEPHONE (Include area code) <i>(805) 922-4624</i>	6. FAX (Include area code) <i>(805) 928-0293</i>
7. PVPO NUMBER <i>200300056</i>		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. National or a U.S. based company? If no, give name of country ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (If needed, use the reverse for extra space):

*Vandenberg was developed by Keith Trammell, plant breeder
for Pybas Vegetable Seed Company.***PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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